



Infrastructure Description

Internet2 is the leading advanced networking consortium for research and education in the US. For over a decade, Internet2 has provided high-speed Internet capabilities to its members and has led the development of next generation networking technologies.

Internet2 NewNet National Backbone

Recently, the Internet2 network began upgrading to new technology. Previously, the Internet2 was using a 10 Gbps (billion bits per second) backbone network. The Internet2 NewNet will be in place across the US by September 2007 and will have increased the backbone speed by 10 times to 100 Gbps.

Typical connections to the network will be through two 10 Gbps links – one providing a stable production network, and the second providing a new dynamic network service. The dynamic network service has the capability of setting up short-term high speed connections quickly, fostering collaboration and special projects in a way not possible on today's network.

The Kentucky Internet2 Connection

Louisville is fortunate to be one of only 26 Internet2 optical switching nodes in the nation.

The University of Louisville and the University of Kentucky have been long term users of Internet2. Now, the larger education and research communities have direct access via the Kentucky Postsecondary Education Network (KPEN). The latest high speed networks use fiber optics

and optical network technology to provide much greater bandwidth at a reasonable cost. Kentucky is developing a Regional Optical Network (RON) to extend the capabilities of the Internet2 to support education, research, government and economic development across the state. A RON will make it possible for the full capabilities of the Internet2 to be extended at very high speeds to organizations throughout Kentucky.

Current Status

The optical switching node in Kentucky became operational in April 2007 and the University of Louisville completed a fiber link into the new Internet2 facility in early May 2007. The University of Kentucky and the remainder of the Kentucky education community, whose access is sponsored by UK, are expected to start using the new network by fall 2007.

What Does This Mean for Kentucky?

It is expected that the Internet2 and the Kentucky RON will be used for collaboration between K-20 education and research institutions, government, health care and other organizations through resource sharing, access to digital libraries, interactive video-conferencing, high-speed data services, and other capabilities. This helps Kentucky and its people to compete in the global information economy.

For more information about Internet2 activities in Kentucky and around the country, please visit:

<http://i2.ky.gov/>

<http://www.internet2.edu/>